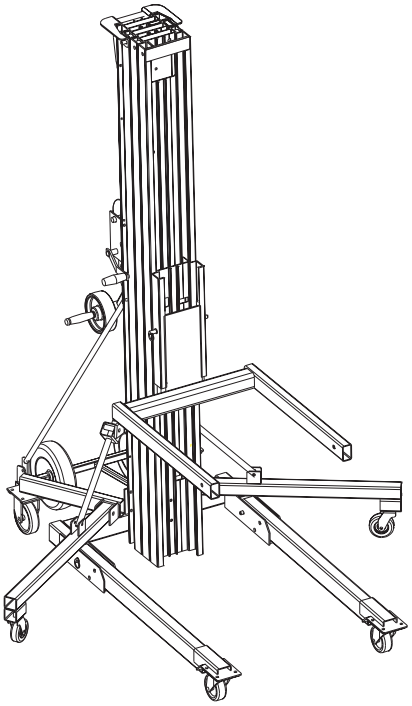
Genie Industries

Technical Publications

Genie SUPERLIFT Contractor

Parts & Service Manual



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Safety Rules

Warning

Failure to obey the instructions and safety rules in this manual and the *Genie Superlift Contractor Operator's Manual* may result in death or serious injury.

Many of the hazards identified in the operating instruction manual are also safety hazards when maintenance and repair procedures are performed.

Do Not Perform Maintenance Unless:

- ☑ You are trained and qualified to perform maintenance on this machine.
- ☑ You read, understand and obey:
  - manufacturer's instructions and safety rules
  - employer's safety rules and worksite regulations
  - applicable governmental regulations
- ☑ You have the appropriate tools, lifting equipment and a suitable workshop.

SAFETY RULES

Personal Safety

Any person working on or around a machine must be aware of all known safety hazards. Personal safety and the continued safe operation of the machine should be your top priority.

Read each procedure thoroughly. This manual and the decals on the machine use signal words to identify the following:

⚠DANGER Indicates the presence of a hazard that **will** cause death or serious injury.

⚠WARNING Indicates the presence of a hazard that **may** cause death or serious injury.

⚠CAUTION Indicates the presence of a hazard that **will** or **may** cause serious injury or damage to the machine.

NOTICE Indicates special operation or maintenance information.

Be sure to wear protective eye wear and other protective clothing if the situation warrants it.

Be aware of potential crushing hazards such as moving parts, free swinging or unsecured components, and lifting or placing loads. Always wear approved steel-toed shoes.

Workplace Safety

Be sure to keep sparks, flames and lighted tobacco away from flammable and combustible materials like battery gases, cleaning solvents and engine fuels. Always have an approved fire extinguisher within easy reach.

Be sure that all tools and working areas are properly maintained and ready for use. Keep work surfaces clean and free of debris that could get into machine components and cause damage.

Be sure that your workshop or work area is properly ventilated and well lit.

Be sure any forklift, overhead crane or other lifting or supporting device is fully capable of supporting and stabilizing the weight to be lifted. Use only chains or straps that are in good condition and of ample capacity.

Be sure that fasteners intended for one time use (i.e., cotter pins and self-locking nuts) are not reused. These components may fail if they are used a second time.

Be sure to properly dispose of old oil or other fluids. Use an approved container. Please be environmentally safe.

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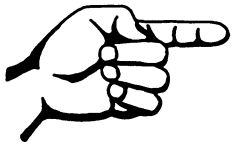

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Specifications

Model	SLC-6	SLC-12	SLC-18	SLC-24
Height-Stowed	86 in 218 cm	86 in 218 cm	86 in 218 cm	86 in 218 cm
Width	31 1/2 in 80 cm	31 1/2 in 80 cm	31 1/2 in 80 cm	31 1/2 in 80 cm
Width-stabilizers lowered (if equipped)	66 in 168 cm	66 in 168 cm	66 in 168 cm	66 in 168 cm
Length-Stowed	27 3/4 in 70 cm	27 3/4 in 70 cm	27 3/4 in 70 cm	27 3/4 in 70 cm
Length-Operating	54 in 137 cm	58 in 147 cm	68 in 173 cm	76 in 193 cm
Ground Clearance	2 in 50.8 mm	2 in 50.8 mm	2 in 50.8 mm	2 in 50.8 mm
Load Capacity at 14" (36 cm) load center	650 lbs 295 kg	650 lbs 295 kg	650 lbs 295 kg	650 lbs 295 kg
Net Weight	166 lbs 75 kg	204 lbs 93 kg	307 lbs 139 kg	374 lbs 170 kg
Airborne Noise Emissions by Machinery Maximum sound level at normal operating workstations (A-weighted)	85 dB	85 dB	85 dB	85 dB

Load Handling Attachments	Length	Width	Depth	Net Weight
Standard Forks	28 in 71 cm	23 in 59 cm	2 1/2 in 6.5 cm	26 1/2 lbs 12 kg
Adjustable Forks	27 1/2 in 70 cm	11 1/2 to 30 in 29 to 76 cm	2 1/2 in 6.5 cm	52 1/2 lbs 23.8 kg
Boom	44 in 112 cm	3 in 8 cm	6 in 16 cm	34 1/2 lbs 15.6 kg
Pipe Cradle	27 1/2 in 70 cm	24 1/2 in 63 cm	6 in 11.5 cm	10 lbs 4.5 kg
Load Platform	26 in 66 cm	23 in 58 cm	6 in 15 cm	26 lbs 12.0 kg
Fork Extensions (each)	30 in 76 cm	2 in 5 cm	3 in 8 cm	4 1/2 lbs 2 kg

Dimensions		SLC-6	SLC-12	SLC-18	SLC-24
Standard Forks	forks down	5 ft 8 in 1.72 m	11 ft 2 in 3.40 m	16 ft 9 in 5.11 m	22 ft 3 in 6.78 m
	forks up	7 ft 5 in 2.26 m	12 ft 11 in 3.94 m	18 ft 6 in 5.64 m	24 ft 0 in 7.32 m
Adjustable Forks	forks down	5 ft 8 in 1.72 m	11 ft 2 in 3.40 m	16 ft 9 in 5.11 m	22 ft 3 in 6.78 m
	forks up	7 ft 5 in 2.26 m	12 ft 11 in 3.94 m	18 ft 6 in 5.64 m	24 ft 0 in 7.32 m
Boom		6 ft 8 in 2.03 m	12 ft 2 in 3.71 m	17 ft 9 in 5.41 m	23 ft 3 in 7.09 m

SPECIFICATIONS

Bolt Torque Specifications

Size	Threads	SAE Grade 5 Bolts			SAE Grade 8 Bolts		
		Torque - Dry inch-pounds	Torque - Dry foot-pounds	Torque - Dry Newton meters	Torque - Dry inch-pounds	Torque - Dry foot-pounds	Torque - Dry Newton meters
10	24	43		5	60		7
	32	49		6	68		8
1/4	20	96		11	144		16
	28	120		14	168		19
5/16	18		17	23		25	34
	24		19	28		25	34
3/8	16		30	41		45	61
	24		35	48		50	68
7/16	14		50	68		70	95
	20		55	75		80	109
1/2	13		75	102		110	149
	20		90	122		120	163
9/16	12		110	149		150	204
	18		120	163		170	231
5/8	11		150	204		220	298
	18		170	231		240	326
3/4	10		260	353		380	515
	16		300	407		420	570
7/8	9		430	583		600	814
	14		470	637		660	895
1	8		640	868		900	1221
	12		700	949		1000	1356

Torque specifications for lubricated bolts are 25% less than dry torque specifications for each bolt size.

These bolt torque specifications are for general use only. Specification may vary depending on application of bolt.

Scheduled Maintenance Inspections

Observe and Obey:

- ☑ Maintenance inspections shall be completed by a person trained and qualified on the maintenance of this machine.
- ☑ Scheduled maintenance inspections shall be completed daily, quarterly and annually as specified on the maintenance inspection report.

⚠WARNING Failure to properly complete each inspection when required may result in death, serious injury or substantial machine damage.

- ☑ Immediately tag and remove from service a damaged or malfunctioning machine.
- ☑ Repair any machine damage or malfunction before operating machine.
- ☑ Keep records on all inspections for three years.
- ☑ Machines that have been out of service for a period longer than 3 months must complete the quarterly inspection.

About This Section

Schedule

There are three types of maintenance inspections that must be performed according to a schedule—daily, quarterly and annually. To account for repeated procedures, the Maintenance Tables and the Maintenance Inspection Report have been divided into three subsections—A, B, C. Use the following chart to determine which group(s) of procedures are required to perform a scheduled inspection.

Inspection	Table or Checklist
Daily	A
Quarterly (every 150 hours or three months)	A + B
Annual	A + B + C

Maintenance Tables

The maintenance tables contained in this section provide summary information on the specific physical requirements for each inspection.

Complete step-by-step instructions for each scheduled maintenance procedure are provided in section 4, *Scheduled Maintenance Procedures.*

Maintenance Inspection Report

The maintenance inspection report contains checklists for each type of scheduled inspection.

Make copies of the Maintenance Inspection Report to use for each inspection. Keep records on all inspections for three years.

Maintenance Tables

Table A		Tools are required	New parts required	Dealer service suggested
A-1	Inspect the Operator's Manual			
A-2	Inspect the Decals and Placards			
A-3	Inspect for Damage, Loose or Missing Parts			
A-4	Check the Winch Operation			
A-5	Inspect the Columns for Damage			
A-6	Inspect the Cable and Cable Pulleys			
A-7	Check the Mast for Proper Sequencing			
A-8	Inspect the Casters and Wheels			
Table B				
B-1	Inspect All Welds			
B-2	Clean the Columns			
B-3	Inspect and Lubricate the Winch			

MAINTENANCE TABLES

Table C		Tools are required	New parts required	Dealer service suggested
C-1	Lubricate the Casters and Wheels			
C-2	Inspect the Mast Assembly for Wear			
C-3	Replace the Winch Friction Disks			
C-4	Inspect the Safety Brake System - If Equipped			
C-5	Inspect the Painted Surfaces			

Maintenance Inspection Report

Model

Serial number

Date

Machine owner

Inspected by (print)

Inspector signature

Inspector title

Inspector company

Instructions

- Make copies of this page to use for each inspection.
- Select the appropriate checklist(s) for the type of inspection to be performed.

☐ **Daily Inspection: A**
☐ **Quarterly Inspection: A+B**
☐ **Annual Inspection: A+B+C**

- Place a check in the appropriate box after each inspection procedure is completed.
- If any inspection receives an "N", remove the machine from use, repair and re-inspect it. After repair, place a check in the "R" box.

Legend

Y = yes, acceptable
N = no, unacceptable
R = repaired

Comments

Checklist A		Y	N	R
A-1	Operator's manual			
A-2	Decals and placards			
A-3	Damage, loose or missing parts			
A-4	Check winch			
A-5	Columns			
A-6	Inspect cable and pulleys			
A-7	Check mast for proper sequencing			
A-8	Inspect casters and wheels			

Checklist B		Y	N	R
B-1	Inspect welds			
B-2	Clean columns			
B-3	Inspect and lubricate winch			

Checklist C		Y	N	R
C-1	Lubricate casters and wheels			
C-2	Mast assembly wear			
C-3	Replace winch friction disks			
C-4	Safety brake system (if equipped)			
C-5	Inspect painted surfaces			

Scheduled Maintenance Procedures

Observe and Obey:

- ☑ Maintenance procedures shall be completed by a person trained and qualified on the maintenance of this machine.
- ☑ Scheduled maintenance procedures shall be completed daily, quarterly (every 3 months) and annually as specified on the maintenance inspection report.

⚠WARNING Failure to properly complete each inspection when required may result in death, serious injury or substantial machine damage.

- ☑ Immediately tag and remove from service a damaged or malfunctioning machine.
- ☑ Repair any machine damage or malfunction before operating machine.
- ☑ Keep records on all inspections for three years.
- ☑ Be sure the capacities of sawhorses or other supports are sufficient to withstand machine weight. See Specifications section for specific weight.
- ☑ Be sure overhead cranes or other lifting devices are of ample capacity to handle machine weight. See Specifications section for specific weight.
- ☑ Unless otherwise specified, perform each procedure with the machine in the following configuration:
  - machine positioned on a flat level surface
  - carriage fully lowered
  - casters locked
  - load handling attachment installed

About This Section

This section contains detailed procedures for each scheduled maintenance inspection.

Each procedure includes a description, safety warnings and step-by-step instructions.

Symbols Legend

⚠DANGER Indicates the presence of a hazard that **will** cause death or serious injury.

⚠WARNING Indicates the presence of a hazard that **may** cause death or serious injury.

⚠CAUTION Indicates the presence of a hazard that **will** or **may** cause serious injury or damage to the machine.

NOTICE Indicates special operation or maintenance information.

⊙ Indicates that a specific result is expected after performing a series of steps.

Table A Procedures

A-1
Inspect the Operator's Manual

Maintaining the operator's manual in good condition is essential to safe machine operation. The operator's manual is included with each machine and should be stored in the box provided on the mast. An illegible or missing manual will not provide safety and operational information necessary for a safe operating condition.

1 Check to make sure the operator's manual is present and complete in the storage container on the mast.

2 Examine the pages of the manual to be sure that they are legible and in good condition.

3 Always return the manual to the storage container after use.

NOTICE Contact your authorized Genie distributor or Genie Industries if a replacement manual is needed.

A-2
Inspect the Decals and Placards

Maintaining all of the safety and instructional decals and placards in good condition is essential for safe machine operation. Decals alert operators and personnel to the many possible hazards associated with using this machine. They also provide users with operation and maintenance information. An illegible decal will fail to alert personnel of a procedure or hazard and could result in unsafe operating conditions.

1 Refer to the decals section in the operator's manual and use the decal list and illustration to determine that all decals and placards are in place.

2 Inspect all decals for legibility and damage. Replace any damaged or illegible decal immediately.

NOTICE Contact your authorized Genie distributor or Genie Industries if replacement decals are needed.

A-3
Inspect for Damage , Loose or Missing Parts

Daily machine condition inspections are essential to safe machine operation and good machine performance. Failure to locate and repair damage, and discover loose or missing parts may result in an unsafe operating condition.

1 Inspect the entire machine for damage and improperly installed or missing parts including:

NOTICE Refer to Section Seven, Service Parts, for component locations.

- cable anchor
- cable and pulleys
- mast columns
- nuts, bolts and other fasteners
- load handling attachment
- winch and related components
- legs and casters
- stabilizers, latch plates and casters
- loading wheels and pull pin
- manual storage container
- dents or damage to machine
- cracks in welds or structural components
- corrosion to painted surfaces
- corrosion or oxidation to all other surfaces

A-4
Check the Winch Operation

Detection of damage to the winch is essential to safe machine operation. An unsafe working condition exists if the winch is damaged or not operating correctly. A daily check of the winch operation allows the inspector to identify changes in the operating condition of the winch that might indicate damage.

1 Visually inspect all winch components for damage.

2 Raise the carriage through a partial cycle and release the winch handles.

⊙ Result: The winch should operate smoothly, free of hesitation or binding. The carriage should not lower when the handles are released.

3 Fully lower the carriage.

⊙ Result: The winch should operate smoothly, free of hesitation or binding.

A-5
Inspect the Columns for Damage

Detection of damage to columns is essential for safe machine operation. An unsafe working condition exists if the columns are damaged and do not operate smoothly, free of hesitation and binding. A daily check of the columns allows the inspector to identify changes in the operating condition of the mast assembly that might indicate damage.

1 Visually inspect the exterior of each column for the following:

- dents, gouges or abrasions
- bends or warping
- excessive wear

2 Raise and lower all columns through a complete cycle.

⊙ Result: Columns should raise and lower smoothly, free of hesitation and binding.

A-6
Inspect the Cable and Cable Pulleys

Detection of damage to cable or pulleys is essential for safe machine operation. An unsafe working condition exists if these components are damaged and do not operate smoothly. A daily check of this system allows the inspector to identify changes in the operating condition that might indicate damage.

1 Visually inspect the cable and components for the following:

- frayed or broken wire strands
- kinks in the cable
- corrosion
- paint or foreign materials
- split or cracked swagged end(s)
- cable is properly secured to the winch
- cable is properly secured to the mast

2 Using proper lifting techniques, lay the machine back against a sawhorse or other suitable support and check to be sure of the following:

- cable is on the pulleys
- upper and lower mounting brackets are properly secured
- no broken or damaged pulleys or pulley guards
- no unusual or excessive pulley wear

TABLE A PROCEDURES

A-7
Check the Mast for Proper Sequencing

Detection of damage to the mast is essential for safe machine operation. An unsafe working condition exists if the mast is damaged and does not sequence properly, free of hesitation and binding. A daily check of the sequencing allows the inspector to identify changes in the operating condition of the mast assembly that might indicate damage.

1 Raise all columns to full height with no load on the load handling attachment.

⊙ Result: The carriage should rise to the top of the front column section, followed in consecutive order by each column.

2 Lower the columns to the stowed position.

⊙ Result: The columns should lower in reverse order, followed by the carriage.

A-8
Inspect the Casters and Wheels

Extremely dirty conditions may require that the casters and wheels be inspected and lubricated more often.

1 Visually inspect each caster and wheel for cuts, cracks or unusual wear.

2 Move the machine on a flat smooth surface and check that the casters and wheels roll smoothly, free of hesitation and binding.

3 Lock the base swivel casters.

⊙ Result: The wheels should not roll.

Table B Procedures

B-1
Inspect All Welds

Weld inspections are essential to safe machine operation and good machine performance. Failure to locate and repair damage may result in an unsafe operating condition.

1 Visually inspect the welds in the following locations:

- winch mounting plate
- loading wheels/steer handle
- base
- legs and stabilizers
- load handling attachment(s)

B-2
Clean the Columns

Clean columns are essential to good machine performance and safe operation. Extremely dirty conditions may require that the columns be cleaned more often.

1 Raise all columns to the maximum height.

2 Visually inspect the inner and outer channels of the columns for debris or foreign material. If necessary, use a mild cleaning solvent to clean the columns.

⚠WARNING This procedure will require the use of additional access equipment. Do not place ladders or scaffold on or against any part of the machine. Performing this procedure without the proper skills and tools may result in death or serious injury. Dealer service is strongly recommended.

⚠CAUTION Do not apply any lubrication to the columns.

B-3
Inspect and Lubricate the Winch

Maintaining the winch is essential to good machine performance and safe operation. An unsafe working condition exists if the winch has excessive wear and/or does not operate smoothly, free of hesitation and binding.

1 Carefully lubricate the following areas with automotive grease:

- the cable drum gear
- the teeth on the pinion gear that meshes with the cable drum gear
- the threads on the pinion shaft, under the pinion gear

NOTICE Do not apply grease to brake friction disks or rachet gear.

2 Carefully lubricate with 30W oil both pivot points on each ratchet pawl.

3 Inspect the friction disks for excessive wear. Replace if pad is less than 1/16 inch (1.5 mm) thick.

4 Inspect pinion shaft bushings for excessive wear. Replace if wall thickness of bushing is less than 1/8 inch (3.1 mm).

5 Lubricate the frame drum spacer. Tighten the drum bolt to 20 ft-lbs (27 Nm). Do not overtighten.

Table C Procedures

C-1
Lubricate the Casters and Wheels

Extremely dirty conditions may require that the casters and wheels be inspected and lubricated more often.

1 Visually inspect each caster and wheel for cuts, cracks or unusual wear.

2 Move the machine on a flat smooth surface and check that the casters and wheels roll smoothly, free of hesitation and binding.

3 Pump grease into the caster or wheel until it can be seen coming out of the bearing gap.

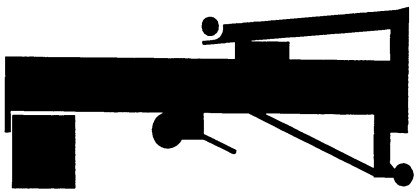
Grease Type	Lithium-based

C-2
Inspect the Mast Assembly for Wear

Detection of excessive or unusual wear in the mast assembly is essential for safe machine operation. An unsafe working condition exists if the mast assembly has excessive wear and/or does not operate smoothly, free of hesitation and binding.

1 Attach an overhead crane or similar lifting device to the lifting bracket on the mast. Rotate the carriage hold down bar over the carriage.

2 Lift the machine slightly and then guide it over onto an appropriate support. The mast assembly should be level with the carriage up.



⚠WARNING Crushing hazard. The machine will fall unless it is properly supported with the overhead crane.

3 Visually inspect the top of each column for clearance between the roller wheel and the adjacent column surface.

⊙ Result: There should be a maximum gap of 0.062 inches (1.57 mm) between the roller wheel and the column.

NOTICE If mast inspection results in a measurement that is not within specification, refer to Repair procedure 2-1, *How to Disassemble the Mast Assembly.*

TABLE C PROCEDURES

4 Visually inspect the bottom of each column for clearance between the roller wheel and the adjacent column surface.

⊙ Result: There should be a maximum gap of 0.062 inches (1.57 mm) between the roller wheel and the column.

NOTICE If mast inspection results in a measurement that is not within specification, refer to Repair procedure 2-1, *How to Disassemble the Mast Assembly.*

C-3
Replace the Winch Friction Disks

Maintaining the winch is essential to good machine performance and safe operation. An unsafe working condition exists if the winch has excessive wear and/or does not operate smoothly, free of hesitation and binding.

1 Replace the winch friction disks. See Repair procedure 3-1, *How to Disassemble the Winch.*

C-4
Inspect the Safety Brake System (If Equipped)

Detection of damage or a defect to the safety brake system is essential for safe machine operation. An unsafe working condition exists if the system is damaged or defective and does not allow the mast to sequence properly, free of hesitation and binding.

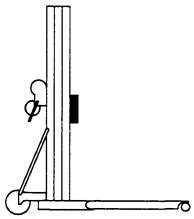
AWARNING This procedure requires specific repair skills and a suitable workshop. Attempting this procedure without these skills may result in death or serious injury or significant component damage. Dealer service is strongly recommended.

ACAUTION Be sure to wear protective gloves to perform this procedure.

1 Install a load handling attachment into the carriage.Do not place any weight on the load handling attachment.

2 Raise the carriage until it is half way up the front column.

3 Physically hold the bottom side of the carriage and lift it approximately 12 inches (30.5 cm), then drop it.



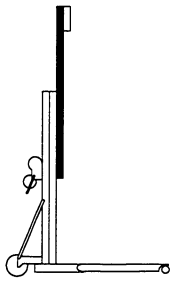
⊙ Result: The carriage should stop within 5 to 8 inches (12.7 to 20.3 cm) and the safety brake should lock.

ACAUTION Crushing hazard. Do not stand directly under columns.

4 Raise the carriage 12 inches (30.5 cm) to unlock the safety brake.

5 Continue raising the carriage until the front column is half way up the adjacent column.

6 Physically hold the bottom side of the front column, and lift it approximately 12 inches (30.5 cm), then drop it.



⊙ Result: The column should stop within 5 to 8 inches (12.7 to 20.3 cm) and the safety brake should lock.

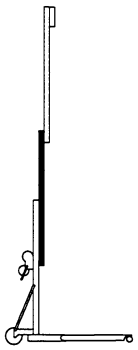
ACAUTION Crushing hazard. Do not stand directly under columns.

7 Raise the front column 12 inches (30.5 cm) to unlock the safety brake.

8 Continue raising the carriage until the front column is fully raised and the next column is half way up the adjacent column.

TABLE C PROCEDURES

9 Physically hold the bottom side of the next column, and lift it approximately 12 inches (30.5 cm), then drop it.



⊙ Result: The column should stop within 5 to 8 inches (12.7 to 20.3 cm) and the safety brake should lock.

⚠CAUTION Crushing hazard. Do not stand directly under columns.

10 Repeat steps 7 through 9 to test all remaining columns.

NOTICE When unlocking the safety brake, it may be necessary to hold down the column behind the brake to be unlocked.

NOTICE The number one column (column attached to base) does not have a safety brake and will not need to be tested.

C-5
Inspect the Painted Surfaces

Inspecting the painted surfaces of your machine is essential to safe operation. An unsafe working condition exists if there is damage to painted surfaces that is not corrected.

1 Visually inspect all painted surfaces for the following conditions:

- blistering
- rust
- peeling
- fading
- corrosion

NOTICE Repair or replace any component if it is damaged.

Troubleshooting Flow Charts

Observe and Obey:

- ☑ Troubleshooting and repair procedures shall be completed by a person trained and qualified on the repair of this machine.
- ☑ Immediately tag and remove from service a damaged or malfunctioning machine.
- ☑ Repair any machine damage or malfunction before operating the machine.
- ☑ Be sure the capacities of sawhorses or other supports are sufficient to withstand machine weight. See Specification section for specific weight.
- ☑ Be sure overhead cranes or other lifting devices are of ample capacity to handle machine weight. See Specification section for specific weight.

Before Troubleshooting:

- ☑ Read, understand and obey the safety rules and operating instructions printed in the *Genie Superlift Contractor Operator's Manual.*
- ☑ Be sure that all necessary tools and test equipment are available and ready for use.
- ☑ Read each appropriate flow chart thoroughly. Attempting shortcuts may produce hazardous conditions.
- ☑ Be aware of the following hazards and follow generally accepted safe workshop practices.

⚠ DANGER Crushing hazard. When testing or replacing primary component, always support the structure and secure it from movement.

NOTICE Perform all troubleshooting on a firm level surface.

NOTICE Two persons will be required to safely perform some troubleshooting procedures.

About This Section

When a malfunction is discovered, the flow charts in this section will help a service professional pinpoint the cause of the problem. To use this section, basic hand tools are required.

General Repair Process

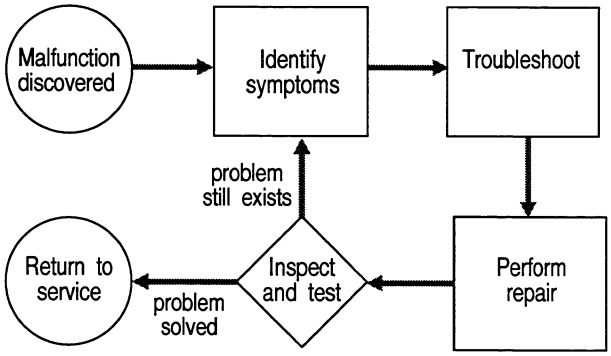


Chart 1

Mast Will Not Sequence Properly

Be sure safety brake (if equipped) is not locked by fully raising and lowering all columns.

Mis-sequencing of the mast columns may occur when the machine is at or near maximum capacity. If mis-sequencing occurs, the columns may shift to their correct position during continued operation or when the load is removed. This shift will not result in a drop of the forks. The carriage should always raise first, and lower last.

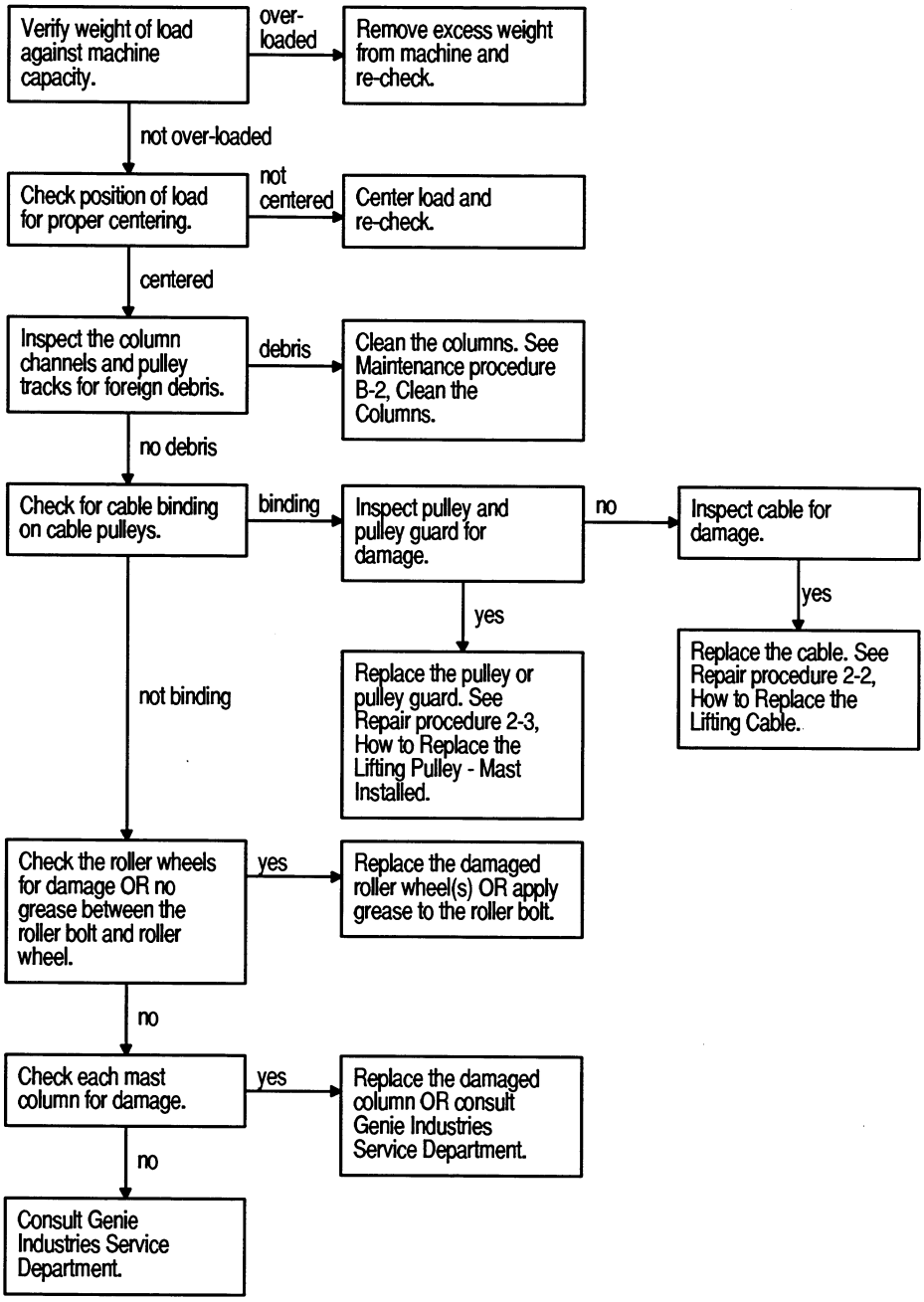

Verify weight of load against machine capacity.
over-loaded
Remove excess weight from machine and re-check.
not over-loaded
Check position of load for proper centering.
not centered
Center load and re-check.
centered
Inspect the column channels and pulley tracks for foreign debris.
debris
Clean the columns. See Maintenance procedure B-2, Clean the Columns.
no debris
Check for cable binding on cable pulleys.
binding
Inspect pulley and pulley guard for damage.
no
Inspect cable for damage.
yes
Replace the cable. See Repair procedure 2-2, How to Replace the Lifting Cable.
yes
Replace the pulley or pulley guard. See Repair procedure 2-3, How to Replace the Lifting Pulley - Mast Installed.
not binding
Check the roller wheels for damage OR no grease between the roller bolt and roller wheel.
yes
Replace the damaged roller wheel(s) OR apply grease to the roller bolt.
no
Check each mast column for damage.
yes
Replace the damaged column OR consult Genie Industries Service Department.
no
Consult Genie Industries Service Department.

Chart 2

Carriage Will Not Raise, But Winch Will Operate

Be sure the carriage hold down bar is not contacting the carriage.

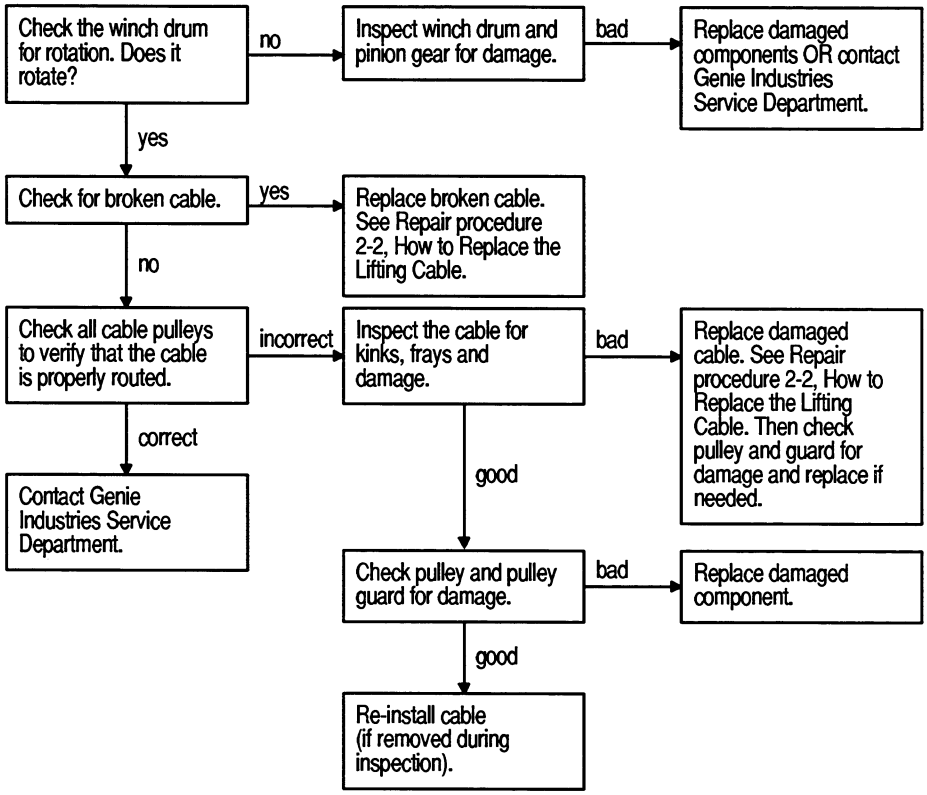
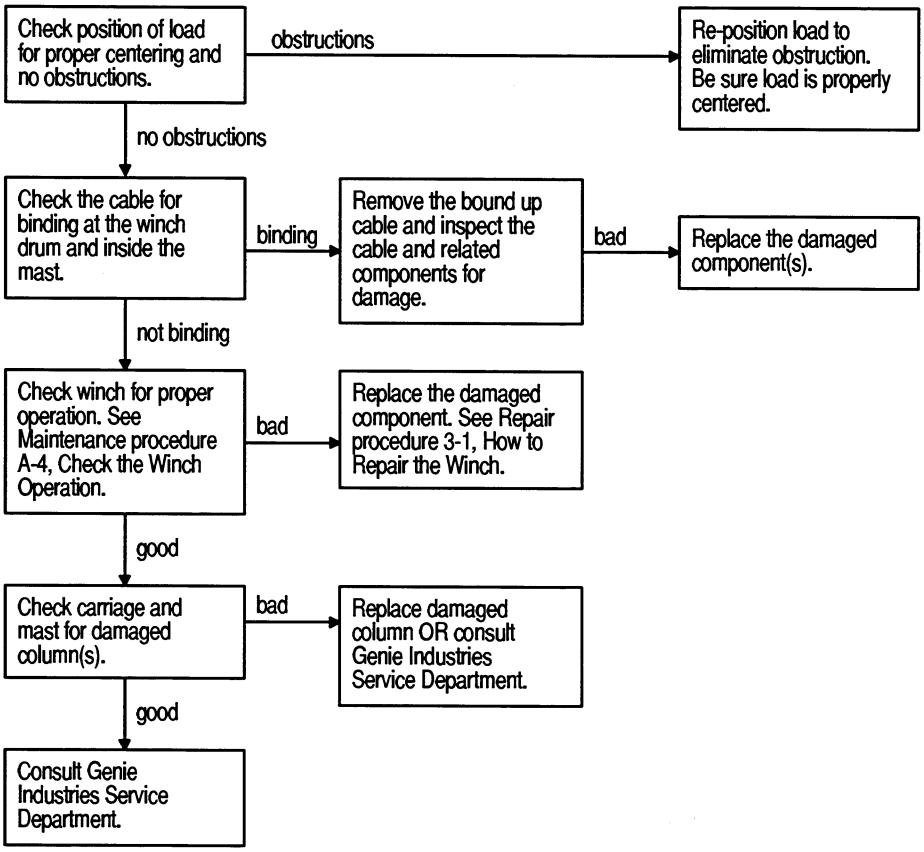

Check the winch drum for rotation. Does it rotate?
no
Inspect winch drum and pinion gear for damage.
bad
Replace damaged components OR contact Genie Industries Service Department.
yes
Check for broken cable.
yes
Replace broken cable. See Repair procedure 2-2, How to Replace the Lifting Cable.
no
Check all cable pulleys to verify that the cable is properly routed.
incorrect
Inspect the cable for kinks, frays and damage.
bad
Replace damaged cable. See Repair procedure 2-2, How to Replace the Lifting Cable. Then check pulley and guard for damage and replace if needed.
correct
Contact Genie Industries Service Department.
good
Check pulley and pulley guard for damage.
bad
Replace damaged component.
good
Re-install cable (if removed during inspection).

Chart 3

Winch Will Not Operate


Check position of load for proper centering and no obstructions.
obstructions
Re-position load to eliminate obstruction. Be sure load is properly centered.
no obstructions
Check the cable for binding at the winch drum and inside the mast.
binding
Remove the bound up cable and inspect the cable and related components for damage.
bad
Replace the damaged component(s).
not binding
Check winch for proper operation. See Maintenance procedure A-4, Check the Winch Operation.
bad
Replace the damaged component. See Repair procedure 3-1, How to Repair the Winch.
good
Check carriage and mast for damaged column(s).
bad
Replace damaged column OR consult Genie Industries Service Department.
good
Consult Genie Industries Service Department.

Repair Procedures

Observe and Obey:

- ☑ Repair procedures shall be completed by a person trained and qualified on the repair of this machine.
- ☑ Immediately tag and remove from service a damaged or malfunctioning machine.
- ☑ Repair any machine damage or malfunction before operating the machine.

Before Repairs Start:

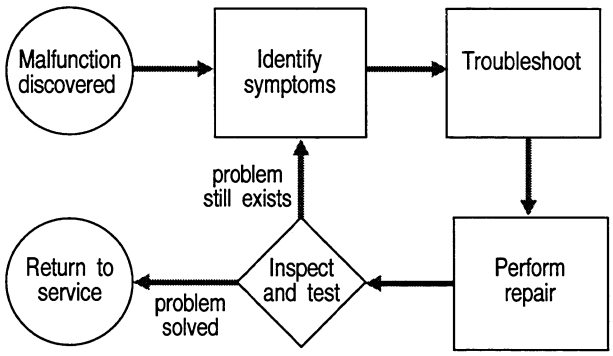
- ☑ Read, understand and obey the safety rules and operating instructions in the *Genie Superlift Contractor Operator's Manual.*
- ☑ Be sure that all necessary tools and parts are available and ready for use.
- ☑ Be sure the capacities of sawhorses or other supports are sufficient to withstand machine weight. See Specification section for specific weight.
- ☑ Be sure overhead cranes or other lifting devices are of ample capacity to handle machine weight. See Specification section for specific weight.
- ☑ Read each procedure completely and adhere to the instructions. Attempting shortcuts may produce hazardous conditions.
- ☑ Unless otherwise specified, perform each procedure with the machine in the following configuration:
  - machine positioned on a flat level surface
  - carriage fully lowered
  - casters locked

About This Section

Most of the procedures in this section should only be performed by a trained service professional in a suitably equipped workshop. Select the appropriate repair procedure after troubleshooting the problem.

Perform disassembly procedures to the point where repairs can be completed. Then to re-assemble, perform the disassembly steps in reverse order.

General Repair Process



Symbols Legend

⚠DANGER Indicates the presence of a hazard that **will** cause death or serious injury.

⚠WARNING Indicates the presence of a hazard that **may** cause death or serious injury.

⚠CAUTION Indicates the presence of a hazard that **will** or **may** cause serious injury or damage to the machine.

NOTICE Indicates special operation or maintenance information.

⊙ Indicates that a specific result is expected after performing a series of steps.

Base Assembly

1-1
How to Remove the Base

1 Fully lower the carriage.

2 Remove the load handling attachment from the machine.

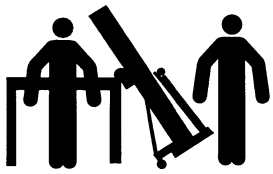
Machines with stabilizers:

3 Remove the mounting fasteners from the stabilizer mounting bracket on the back of the mast.

4 Remove the mounting fastener from each of the stabilizers at the base. Remove the stabilizers from the machine.

All Models:

5 Using proper lifting techniques, tilt the machine back and rest the loading wheels against a sawhorse or other suitable support.



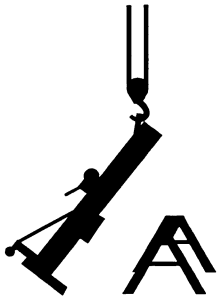
6 Remove the mounting fastener and retaining pin from each leg. Then remove the legs from the machine.

7 Using proper lifting techniques, tilt the machine to the upright position.

8 Attach an overhead crane to the lifting bracket on the number 1 mast.

9 Place a sawhorse on the carriage side of the mast.

10 Lift the machine slightly and then while lowering it, guide the machine over onto the sawhorse.



⚠CAUTION Crushing hazard. The machine will fall unless it is properly supported with the overhead crane.

11 Secure the top of the mast to the sawhorse.

12 Attach an overhead crane to the base and lift the machine enough to slide a second sawhorse under the mast, next to the base.

⚠CAUTION Crushing hazard. The machine will fall unless it is properly supported with the overhead crane.

13 Remove the mounting fasteners from the mast brace to the base. Repeat for other side.

14 Remove the base mounting fasteners. Then remove the base from the machine.

Mast Assembly

2-1 How to Disassemble the Mast Assembly

1 Remove the cable retaining fasteners from the winch drum. Then remove all of the cable from the drum.

2 Tip the machine backwards and rest the top of the number one mast on an appropriate support. The mast assembly should be level with the carriage up.

⚠CAUTION Bodily injury hazard. Use proper lifting techniques.

3 Remove the mounting fastener from the cable anchor on the last column (carriage side).

4 Remove the cable from the mast by pulling on the cable anchor end of the cable.

⚠CAUTION Bodily injury hazard. Cables can fray. Always wear adequate hand protection when handling cable.

5 Slide the carriage forward about 1 foot (30 cm) to expose the column stop mounting fastener attached to the bottom end of the top column, below the carriage. Remove the fastener and the column down stop.

6 **Models with safety brake:** Use a hex key wrench through the access holes in the carriage to release the safety brake. Slide the carriage away from the base 1 inch (2.5 cm) while reaching through both slots. Position the hex key above the safety brake rollers and pull back on the wrench.

7 **Models with safety brake:** Remove the carriage by sliding it out the bottom of the mast towards the base while holding the safety brake rollers in position with the hex key wrench.

7 **Models without safety brake:** Remove the carriage by sliding it out the bottom of the mast towards the base.

8 Repeat steps 5 through 7 for each remaining column.

How to Release the Safety Brake When Servicing the Mast

The safety brake system will lock when the machine is tilted horizontally. When the brake is locked, the columns can extend but not retract. If the safety brake system locks while you are servicing the mast, use one of the following methods described below to release the brake.

A The first method allows you to release each column successively starting at the carriage and removing columns one by one. This is described above in How to Disassemble the Mast Assembly, steps 5-8.

B The second method allows you to release any column in the assembly regardless of position but requires a custom made tool. The tool is a piece of 1/8 to 5/16 inch diameter stiff wire bent in an L shape with one end 1 inch long and the other end 16 inches long. The installation of a handle on the 16" end will make it easier to use. This tool is available from Genie Industries (Genie part number 33875).

Using the special tool, reach from the bottom of the column and into the safety brake access slot in the inner side wall of the column. Slide the carriage away from the base about 1 inch (2.5 cm) while reaching through the far upper end of the slot. Position the short end of the tool above the safety brake rollers and pull back on the tool. Slide the released column out the bottom of the mast assembly.

MAST ASSEMBLY

How to Assemble the Mast

1 Inspect all mast parts for wear and damage, replace as necessary.

2 Clean all of the columns and rollers.

3 Clean all of the safety brake assemblies (if equipped).

4 Position the number one column so that it is open side up and level. If it is not attached to the base, secure the column to your sawhorses or work table before proceeding.

5 Install all column assembly components (if removed during disassembly). Apply a small amount of grease between the roller bolt head and the inside of the roller wheel.

6 Slide the number two column into the number one from the bottom. Stop inserting the column when the top of the column up stop or the safety brake assembly is even with the bottom of the number one column.

7 Repeat with all remaining columns. All columns should be sticking out of the next lower column. Do not install the carriage.

NOTICE Cable is installed after all columns are together as an assembly.

8 Attach the swaged end of the cable to the cable anchor on the top of the front column.

9 With the other end of the cable in hand, feed it through the box section (web) of the carriage into the pulley and push it through the pulley until it comes out the back side of the carriage.

⚠CAUTION Bodily injury hazard. Cables can fray. Always wear adequate hand protection when handling cable.

NOTICE Refer to figure 7-F, in the parts section to identify the cable routing.

10 Insert the carriage into the bottom end of the top column. Hold the carriage from moving and pull the cable up to the top of the column, leaving enough slack so that you can feed the cable through the next pulley.

11 Push the cable through the exposed portion of the pulley at the top of the column until the cable reaches the pulley at the bottom of the column.

12 Using needle nose pliers, insert the cable end into the cable pulley. Push the cable through the pulley until the end comes out.

13 Push the cable between the two mast sections until it comes out the top of the column.

14 Repeat steps 11 through 13, until all the columns are cabled.

15 Slide all the columns forward, until you can install the column stops. Do not slide the columns forward, further than necessary.

16 Install all the components removed during disassembly.

17 Attach the cable to the winch and be sure cable is routed correctly.

18 Raise all the columns to full height to verify proper operation and release the safety brakes (if equipped).

2-2
How to Replace the Lifting Cable

NOTICE All Genie replacement cables come with one preswaged end that terminates to the last column and one taped end that terminates to the winch.

⚠CAUTION Bodily injury hazard. Cables can fray. Always wear adequate hand protection when handling cable.

1 Fully lower the carriage.

2 Wrap a piece of strapping tape around the cable just below the swaged end of the cable.

3 Remove the cable from the winch drum.

4 Cut the cable where you placed the tape.

NOTICE Cable must be cut using a cutting tool which will not leave frays on the end of the cable.

5 Using the cable re-threading tool that came with your cable, insert even amounts of cable into each end of the tool.

6 Pull the old cable out from the winch and pull in new cable at the same time.

NOTICE If cable gets caught as you are pulling it through the columns and pulleys, take care not to pull too hard as you can break the connection between the two cables. Try pulling the cable back and forth until the cable pulls free.

2-3 How to Replace a Lifting Pulley - Mast Installed

1 Fully lower the carriage.

2 Unwind approximately 1 to 2 feet (0.30 to 0.60 meters) of cable from the winch drum.

3 Tip the machine backwards and rest the top of the number one mast on an appropriate support. The mast assembly should be level with the carriage up.

4 If replacing an upper pulley, slide the column that is above the pulley to be replaced forward. If replacing a lower pulley, slide the column with the pulley to be replaced forward. Push the column forward about 6 inches (15.2 cm) to expose the lower column stop.

5 Remove the column stop.

6 Slide the column backwards until the pulley to be replaced is exposed.

7 Remove the two mounting fasteners from the pulley mounting block. Then remove the pulley assembly.

8 Remove the bolt that attaches the pulley to the mounting block.

NOTICE Note where the shims are located before dissembling.

9 Remove the old pulley. Install the cable onto the new pulley, then install the pulley onto the column.

⚠CAUTION When installing the cable onto the pulley, make sure the cable does not get twisted or sequencing and other mast related problems will occur.

NOTICE Make sure the cable guard is located over the retaining pin on the pulley mounting block. Make sure the pulley spins freely after reassembling the pulley assembly.

10 Attach the pulley assembly to the column.

11 Assemble the columns in reverse order of disassembly.

12 Repeat the procedure for other pulleys to be replaced.

Winch

3-1
How to Disassemble the Winch

⚠CAUTION Bodily injury hazard. Cables can fray. Always wear adequate hand protection when handling cable.

1 Fully lower the carriage.

2 Remove the cable retaining fastener from the winch drum. Then remove the cable from the drum.

3 Remove the handles from the pinion shaft.

4 Remove the drum bolt and the drum bolt spacer. Then remove the drum and drum gear cover and the housing spacer from the winch.

5 Remove the two lock nuts from the pinion shaft by holding the opposite end of the shaft by the flattened portion of the threads.

⚠CAUTION Be careful not to damage the threads while holding the pinion shaft.

6 Remove the retaining ring from the pinion shaft.

7 Slide the pinion shaft to the left and remove the pinion spacer, pinion plate, ratchet gear and friction disks. Remove the pinion gear by turning it counterclockwise, then slide it off the right side of the shaft.

8 Remove the pinion shaft from the winch housing.

9 Remove both pinion bushings. Use a soft metal drift equal to the outside diameter of the bushing and tap with rubber mallet.

⚠CAUTION Place a block in between the walls of the winch housing to prevent the housing from bending while removing the bushings.

10 Remove the winch housing from the machine.

How to Assemble the Winch

⚠CAUTION Bodily injury hazard. Cables can fray. Always wear adequate hand protection when handling cable.

NOTICE Refer to Section Seven, Figure 7-I, for exploded view of the winch.

1 Place one side of the winch housing over a vise. Open the vise until it is wider than the outside diameter of the bushing.

2 Insert a soft metal drift through the opposite bushing hole. Tap the drift with a rubber mallet to push the bushing into place. Repeat steps 1 and 2 to insert the other bushing.

NOTICE Use a piece of flatbar between the drift and the bushing to prevent any damage to the bushing.

5 Add two drops of 30W oil to both pivot points on each ratchet pawl.

⚠CAUTION Do not allow grease or oil onto the brake friction disks or the ratchet gear.

6 Install the winch housing onto the mast. Be sure the winch drum is towards the top.

7 Insert the longer threaded end of the pinion shaft through the left bushing approximately half way.

8 Apply a small amount of automotive grease to the large threaded section of the pinion shaft, under the gear nut. Install the pinion gear onto the pinion shaft with the gears towards the left wall of the winch housing. Screw onto the large threads hand tight.

9 Install a friction disk, ratchet gear, friction disk, pinion plate and pinion spacer in respective order onto the pinion shaft.

NOTICE The teeth on the ratchet gear must curve away from the right side wall of the winch housing.

⚠CAUTION Do not allow grease or oil onto the friction disks or the ratchet gear.

10 Push the pinion shaft to the right, through the right pinion bushing and install the pinion shaft retaining ring.

NOTICE Use your fingers to push the ratchet pawls outwards while pushing pinion shaft through the right bushing. Be sure the ratchet pawls are in firm contact with the ratchet gear and all parts move freely.

11 Install the two jam nuts to the right side of the pinion shaft one at a time and tighten.

12 Install a handle to both sides of the pinion shaft in opposite directions and secure with a lock nut on each end of the pinion shaft.

13 Lubricate the outside of the frame spacer that goes through the cable drum with automotive grease and then insert it into the drum.

14 Install the cable drum so that the drum gears mesh with the ratchet gears.

15 Install the drum bolt keeper onto the drum bolt and then insert the drum bolt through the winch housing and drum with the head of the drum bolt on the drum gear side of the winch.

16 Place the drum gear cover into position with the drum bolt slot under the drum bolt keeper.

17 Install the drum bolt jam nut hand tight.

18 Install the housing spacer with the head of the housing spacer bolt on the right side of the winch and through the slotted portion of the drum gear cover. Place the nut on the end of the bolt and tighten.

19 Tighten and torque the drum bolt nut to 20 to 25 ft. lbs.

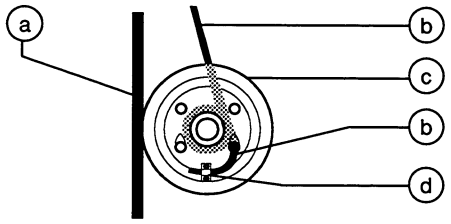
⚠CAUTION Overtightening the drum bolt jam nut may cause damage to the frame spacer and prevent the drum from spinning freely.

20 Lubricate with automotive grease the teeth of the drum gear and the pinion nut that meshes with the drum gear.

⚠CAUTION Do not allow grease or oil onto the friction disks or the ratchet gear.

21 Rotate the drum so that the two square cable keeper holes are at the top. Install the cable keeper clip to the outside of the drum with the two carriage bolts coming through from the inside. Install the lock washers and nut. Do not tighten down the nuts at this point.

22 Route the end of the cable around the winch drum and out through the remaining hole on the left side wall of the drum.

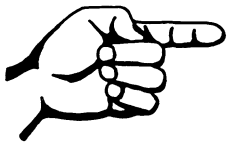


a number one column
b cable
c winch drum
d cable keeper clip

23 Insert the end of the cable under the cable keeper clip approximately 1/2 inch and tighten the cable keeper clip.

24 While holding the cable tight on the drum, rotate the drum with a handle and spool the cable onto the drum neatly. Be sure there are 4 wraps of cable on the drum

⚠CAUTION Component damage hazard. Be sure the cable winds onto the winch drum evenly.



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How To Order Parts

How To Order Service Parts

Please be prepared with the following information when ordering replacement parts for your Genie product:

- Machine model number
- Machine serial number
- Genie part number
- Part description and quantity
- Purchase order number
- "Ship to" address
- Desired method of shipment
- Name and telephone number of the authorized Genie Distributor in your area

If you don't know the name of your authorized distributor, or if your area is not currently serviced by an authorized distributor, call Genie.

Genie North America
Telephone (206) 881-1800
Toll Free 800 536-1800 in U.S.A.
Toll Free 800 426-8089 in Canada
Fax (206) 883-3475

Genie Europe
Telephone (44) 01636-605030
Fax (44) 01636-611090

Machine Information

Model

Serial Number

Date of Purchase

Authorized Genie Distributor

Phone Number

Manuals
Genie Industries offers the following support document for this machine:

Title	Part No.
Operator's Manual	33547

Figure 7-A
Decals and Paint

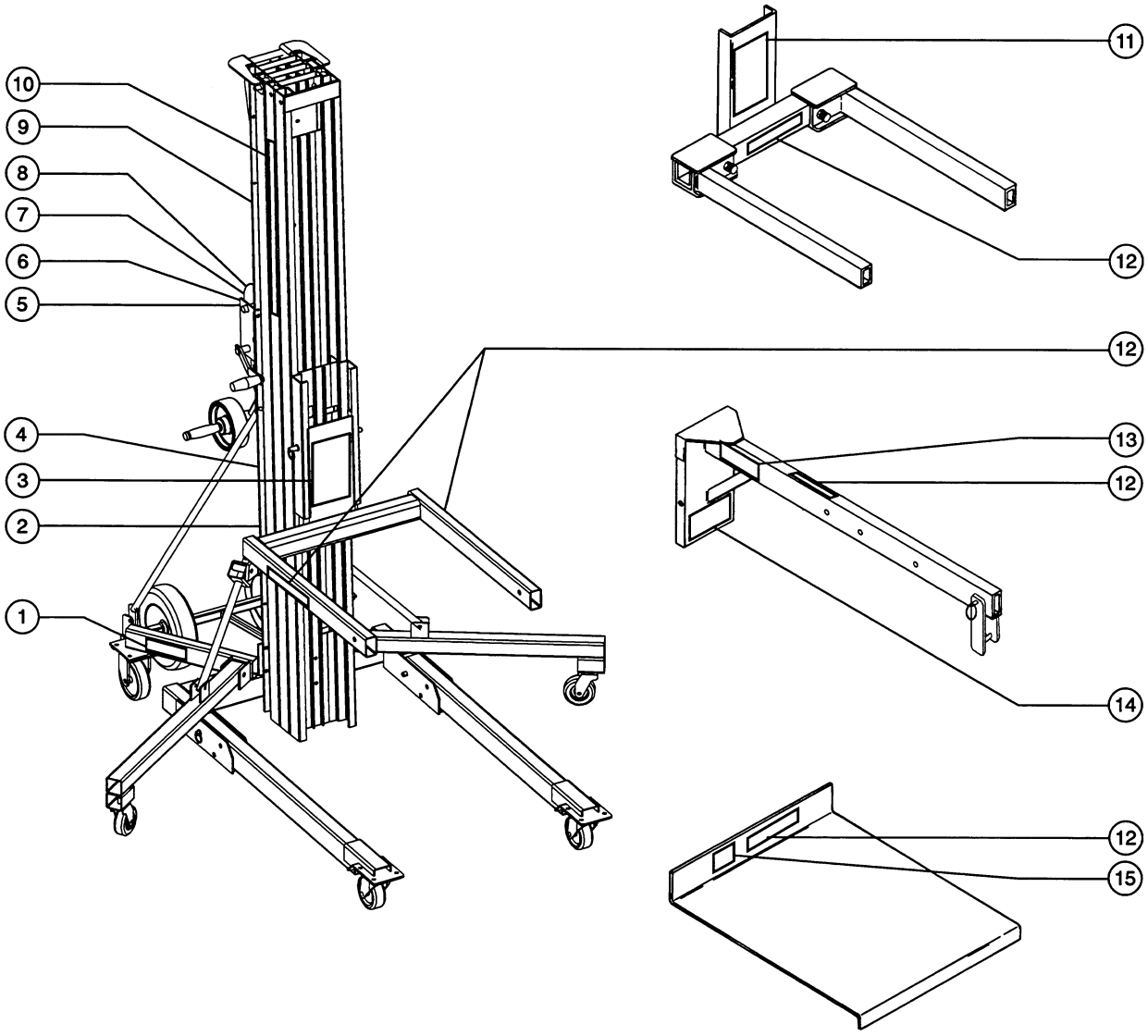

FIGURE 7-A

Index	Part No.	Description	Quantity This Figure
—	1266	Paint - Genie Grey, 1 Gallon (3.78 liters)	—
—	1268	Paint - Genie Grey, 12 Ounces (340.5 grams) Aerosol	—
1	33978	SLC-6	2
—	33979	SLC-12	2
—	33980	SLC-18	2
—	33981	SLC-24	2
2	33982	Serial Plate	1
3	32687	Warning - Standard Forks Safety & Setup	1
4	31072	Label - Operator's Manual Storage Container	1
5	32939	Warning - Lock Brake	1
6	32770	Notice - Winch Instructions	1
7	32938	Label - Use This Winch	1
8	32885	Warning - Silent Winch	1
9	33545	Warning - Machine Safety & Setup	1
10	33983	Genie Superlift Contractor	2
11	32714	Warning - Adjustable Forks Safety & Setup	1
12	33468	Warning - No Riders	5
13	32716	Notice - Boom Setup	2
14	32717	Warning - Boom Safety	1
15	32775	Warning - Fall Hazard	1

Figure 7-B

Number 1 Mast Attached Parts

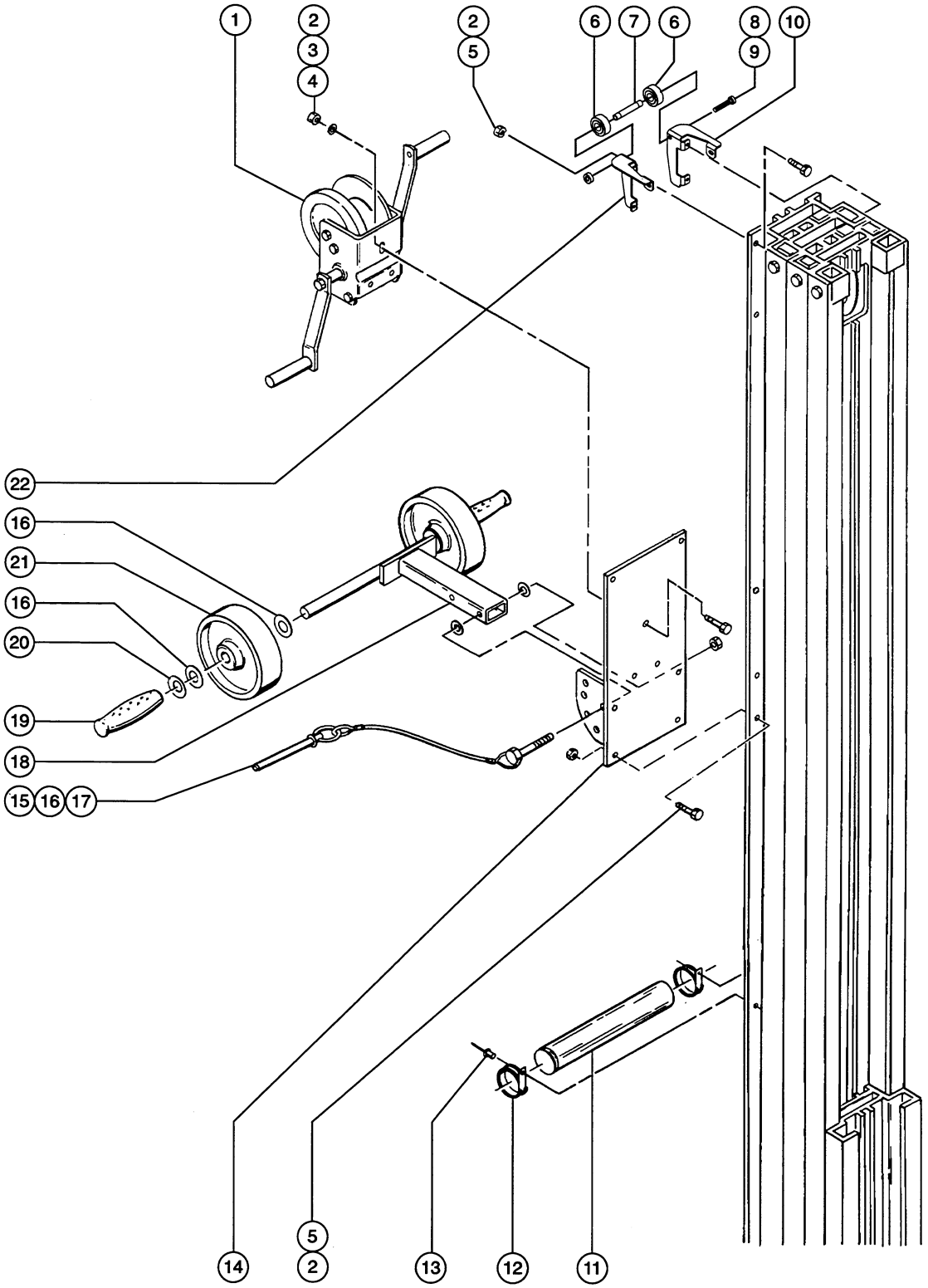

FIGURE 7-B

Index	Part No.	Description	Quantity This Figure
1	Ref.	Winch Assembly (refer to figure 7-I, page 7-20)	—
2	4828	Nut - Nylock, 3/8 -16	7
3	6638	Washer - Flat, 1/4 inch	3
4	6175	Screw - HHC, 3/8 -16 x 1 inch, GR 5	3
5	6019	Screw - HHC, 3/8 -16 x 1.25 inches, GR 5	10
6	32473	Roller - Nylatron	2
7	33843	Spacer - Mast Stiffener	1
8	13005	Screw - HHC, 1/2 -13 x 6 inches, GR 8	1
9	6198	Nut - Nylock, 1/2 -13	1
10	35062	Mast Stiffener - Left Hand	1
11	6600	Container - Manual Storage (manuals listed on page 7-1)	1
12	6653	Clamp - Rubber Cushioned	2
13	7265	Rivet - Steel, 0.375 x 0.25 inch	2
14	35004	Plate - Winch Mounting (includes decal)	1
15	32940	Pin Assembly - with Lanyard	1
—	32500	Pin - Detent, 0.5 x 2.5 inches (1.3 x 6.35 cm)	—
—	2163	Cable, 1/16 inch	—
—	2238	Cable Oval Sleeve, 1/16 inch	—
—	33298	Screw - HHC, 1/2 -13 x 3 inches	—
16	6564	Washer - Shim, 0.781 x 1.312 x 0.093 inch	6
17	6086	Nut - Low Profile Nylock, 1/2 -13	1
18	33540	Loading Wheel Assembly	1
—	33618	Weldment - Loading Wheel	13 inches (33 cm)
19	6587	Handle - Grip	2
20	33385	Washer - Push On Lock	2
21	6566	Wheel - 6 x 0.75 x 2 inches (15.2 x 1.9 x 5 cm)	2
22	35061	Mast Stiffener - Right Hand	1

Figure 7-C

Base Components

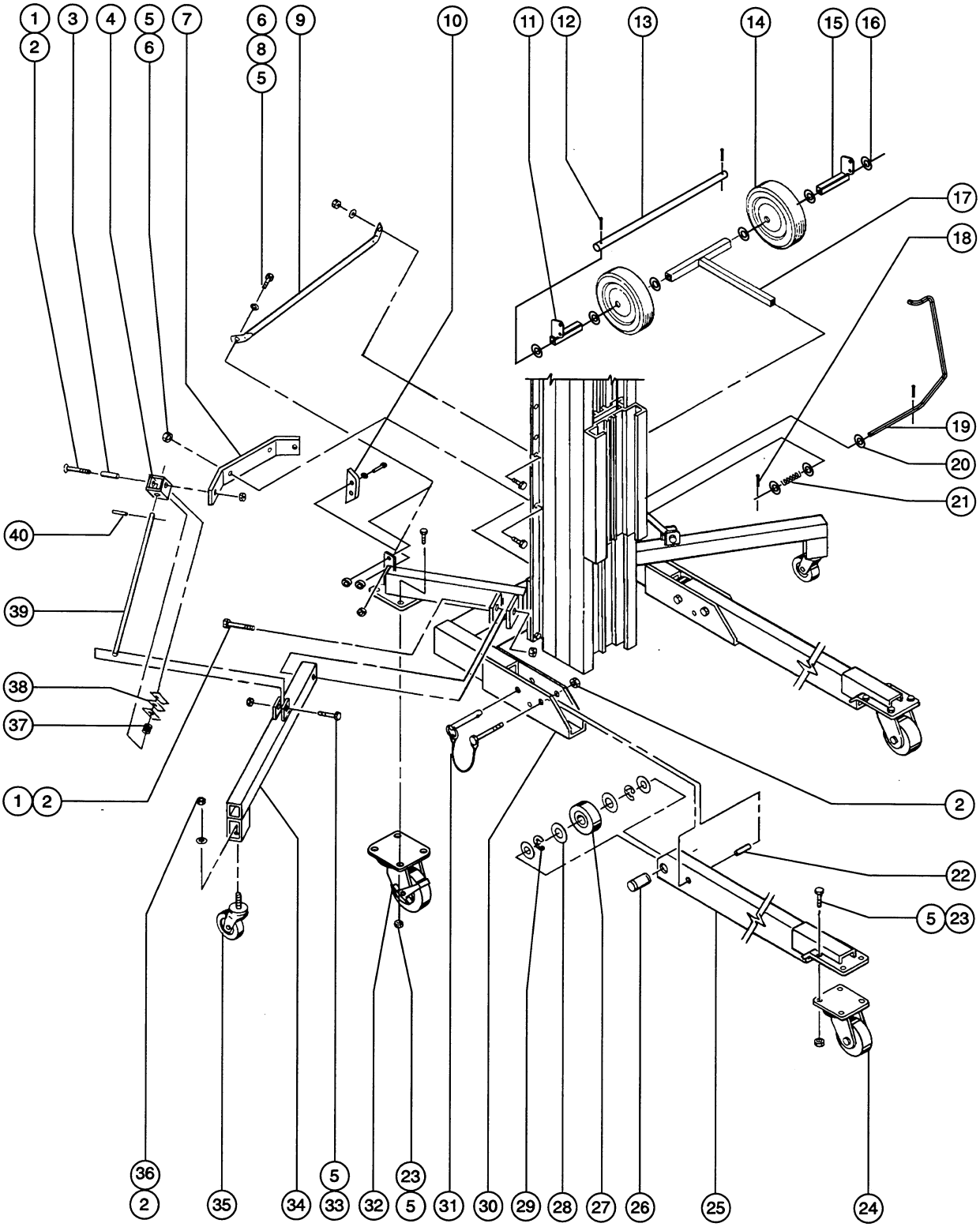

FIGURE 7-C

Index	Part No.	Description	Quantity This Figure
1	10598	Screw - HHC, 1/2 -13 x 3 inches, GR 5	6
2	6086	Nut - Low Profile Nylock, 1/2 -13	8
3	32576	Tube - Stabilizer Pivot	2
4	35213	Tube - Stabilizer Clamp	2
5	4828	Nut - Nylock, 3/8 -16	24
6	6019	Screw - HHC, 3/8 -16 x 1.25 inches, GR 5	10
7	35212	Bracket - Stabilizer Mounting	1
8	6097	Washer - Flat, 0.375 inch	4
9	32883	Mast Brace - Right Side (shown)	1
—	32884	Mast Brace - Left Side	1
10	33670	Pad - Skid, Loading	2
11	33830	Weldment - Axle, Right Side	1
12	5361	Pin - Cotter, 0.125 x 1.5 inches	2
13	35164	Axle	1
14	35064	Wheel - 0.75 x 2.75 x 10 inches (1.9 x 7 x 25.4 cm)	2
15	33829	Weldment - Axle, Left Side	1
16	6564	Washer - Shim, 0.781 x 1.312 x 0.093 inch	6*
17	33831	Weldment - Transport Wheels	1
18	12016	Pin - Cotter, 0.125 x 0.75 inch	2
19	35013	Hold Down Bar Assembly, SLC-6, 12 and 18	1
—	33772	Cap - Hold Down Bar	—
19	35014	Hold Down Bar Assembly, SLC-24	1
—	33772	Cap - Hold Down Bar	—
20	21442	Washer - Shim, 0.75 x 0.45 x 0.032 inch	3*
21	33658	Spring - Hold Down Bar	1
22	32509	Tube - Leg Pivot	2

This parts list continues. Please turn the page.

FIGURE 7-C

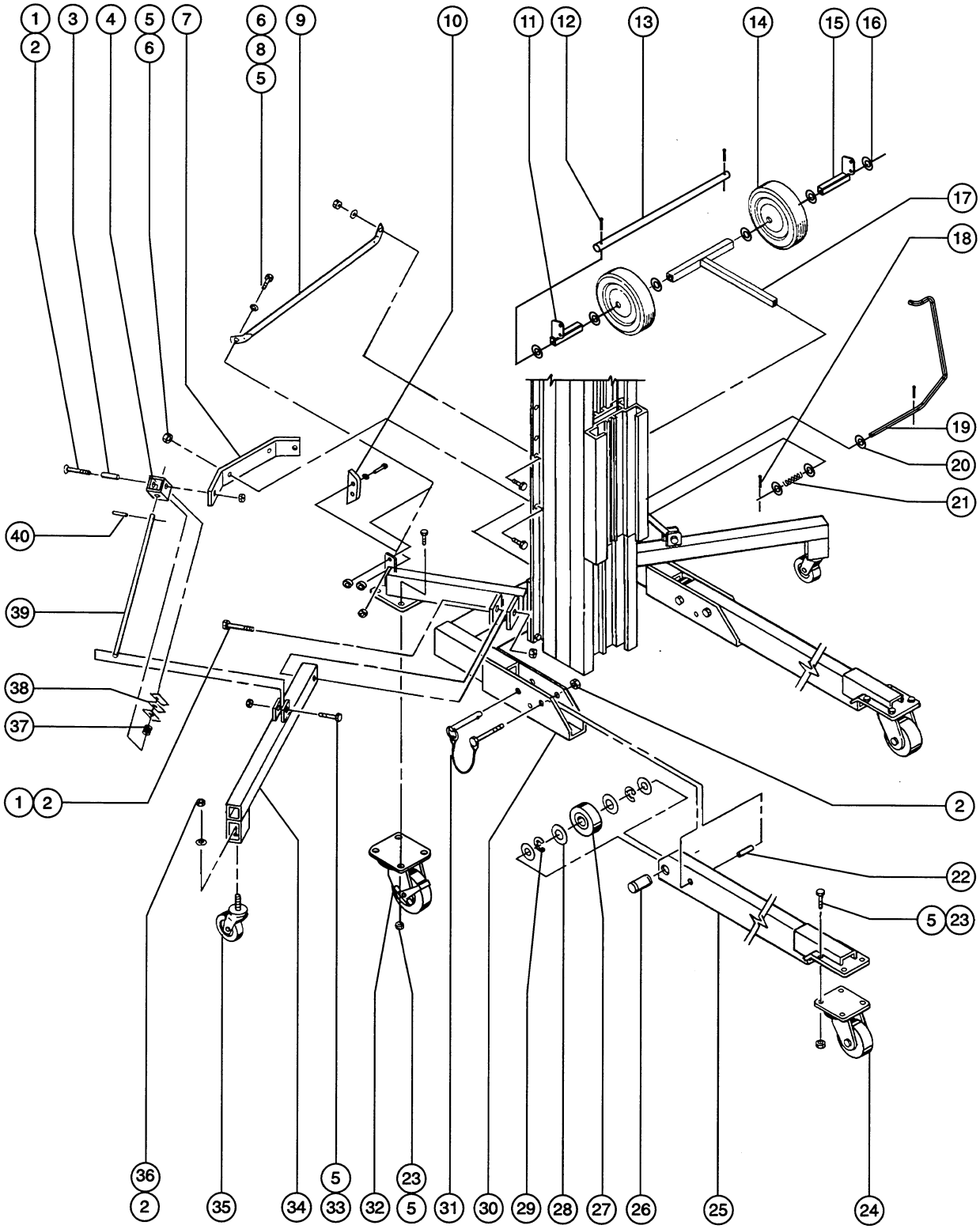
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FIGURE 7-C

Index	Part No.	Description	Quantity This Figure
23	6175	Screw - HHC, 3/8 -16 x 1 inch, GR 5	8
24	35162	Caster - Swivel Plate, 4 x 1.5 inches (10.1 x 3.5 cm)	2
25	35015	Weldment - Leg, SLC-6	2
—	35016	Weldment - Leg, SLC-12	2
—	35017	Weldment - Leg, SLC-18	2
—	35018	Weldment - Leg, SLC-24	2
26	32524	Tube - Axle	2
27	35163	Wheel - Leg	2
28	30748	Shim - 1.01 x 1.63 x 0.062 inch (25.6 x 41.4 x 1.5 mm)	8
29	32499	E-clip - 0.875 inch	4
30	33369	Weldment - Standard Base	1
31	32940	Pin Assembly - with Lanyard	2
—	32500	Pin - Detent, 0.5 x 2.5 inches (1.3 x 6.3 cm)	—
—	2163	Cable, 1/16 inch, 7 x 7 strand, 12 inches (30.4 cm) required	—
—	2238	Cable Oval Sleeve, 1/16 inch	—
—	33298	Screw - HHC, Drilled, 1/2 -13 x 3 inches	—
32	35161	Caster - Swivel Lock, 5 x 2 inches (12.7 x 5.1 cm)	2
33	5224	Screw - HHC, 3/8 -16 x 2 inches, GR 5 (if equipped)	2
34	35019	Weldment - Stabilizer (if equipped)	2
35	33846	Caster - Swivel Stem, 5 x 1.5 inches (12.7 x 3.8 cm) (if equipped)	2
36	6035	Washer - Flat, 0.625 x 1.75 inches (if equipped)	2
37	32519	Spring - Stabilizer Latch (if equipped)	2
38	32897	Kit - Plate Latch, Stabilizer (if equipped)	4
39	32516	Brace - Stabilizer (if equipped)	2
40	11337	Pin - Roll, 0.25 x 1.25 inches (if equipped)	2

Figure 7-D

Mast Components - View 1

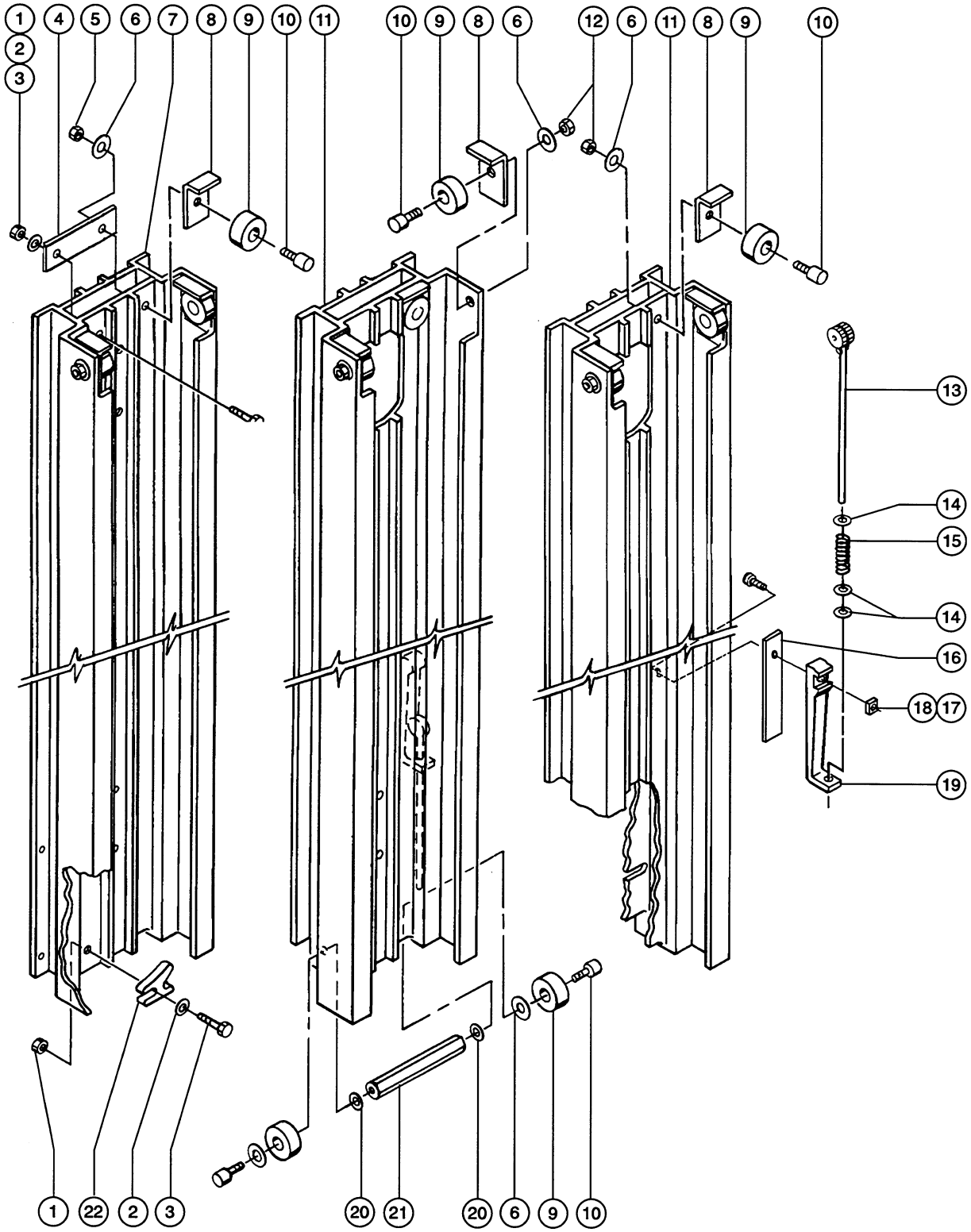

FIGURE 7-D

Index	Part No.	Description	Quantity This Figure
1	4828	Nut - Nylock, 3/8 -16	7
2	12013	Washer - Flat, 0.375 x 0.063 inches	6
3	6019	Screw - HHC, 3/8 -16 x 1.25 inches, GR 5	7
4	35118	Stiffener - Mast	1
5	6086	Nut - Low Profile Nylock, 1/2 -13	2
6	6095	Washer - Flat, 1/2 inch	15
7	33832	Column - Number 1, All SLC Models	1
8	33701	Guard - Roller	11
9	32473	Roller - Nylatron	15
10	32475	Bolt - Roller	15
11	33833	Column - Number 2 through 4, All Models	2
12	6198	Nut - Nylock, 1/2 -13	13
13	33877	Safety Brake Weight Assembly (if equipped)	2
14	21443	Washer - Flat, (if equipped)	6
15	32481	Spring - Safety Brake (if equipped)	2
16	35442	Shim - Safety Brake Ramp (if equipped) (1 per column, 2 per carriage)	2
17	35408	Nut - Square, 3/8 -16 NC	2
18	35463	Screw - FHM, 3/8 -16 x 1.5 inches	2
19	35443	Up Stop	2
—	33606	Ramp - Safety Brake (if equipped)	2
20	8519	Washer - Shim, 0.5 x 0.875 x 0.063 inch	2
21	33811	Coupler - SLC-6	1
—	33811	Coupler - SLC-12	2
—	33811	Coupler - SLC-18	3
—	33811	Coupler - SLC-24	4
22	32522	Down Stop	3

Figure 7-E

Mast Components - View 2

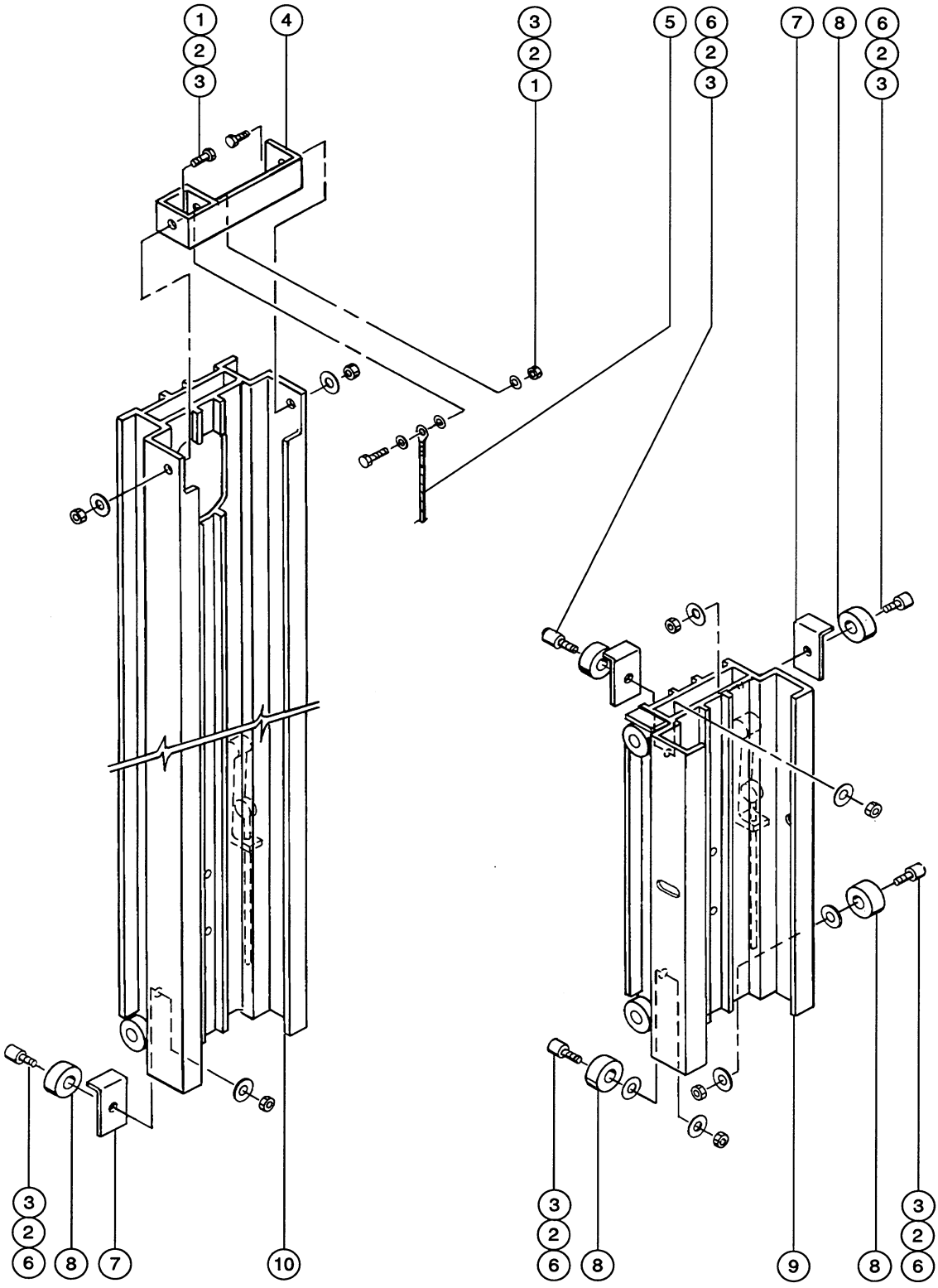

FIGURE 7-E

Index	Part No.	Description	Quantity This Figure
1	10587	Screw - HHC, 1/2 -13 x 1.75 inches, GR 5	3
2	6095	Washer - Flat, 1/2 inch	10
3	6198	Nut - Nylock, 1/2 -13	12
4	35142	Anchor - Cable	1
5	35005	Cable Assembly - SLC-6	1
—	6099	Cable Assembly - SLC-12	—
—	7250	Cable Assembly - SLC-18	—
—	7251	Cable Assembly - SLC-24	—
6	32475	Bolt - Roller	9
7	33701	Guard - Roller	4
8	32473	Roller - Nylatron	9
9	33378	Carriage	1
10	33833	Column Assembly - Number 2 Through 4, All Models	1

Figure 7-F

Mast Components - Pulleys and Cable

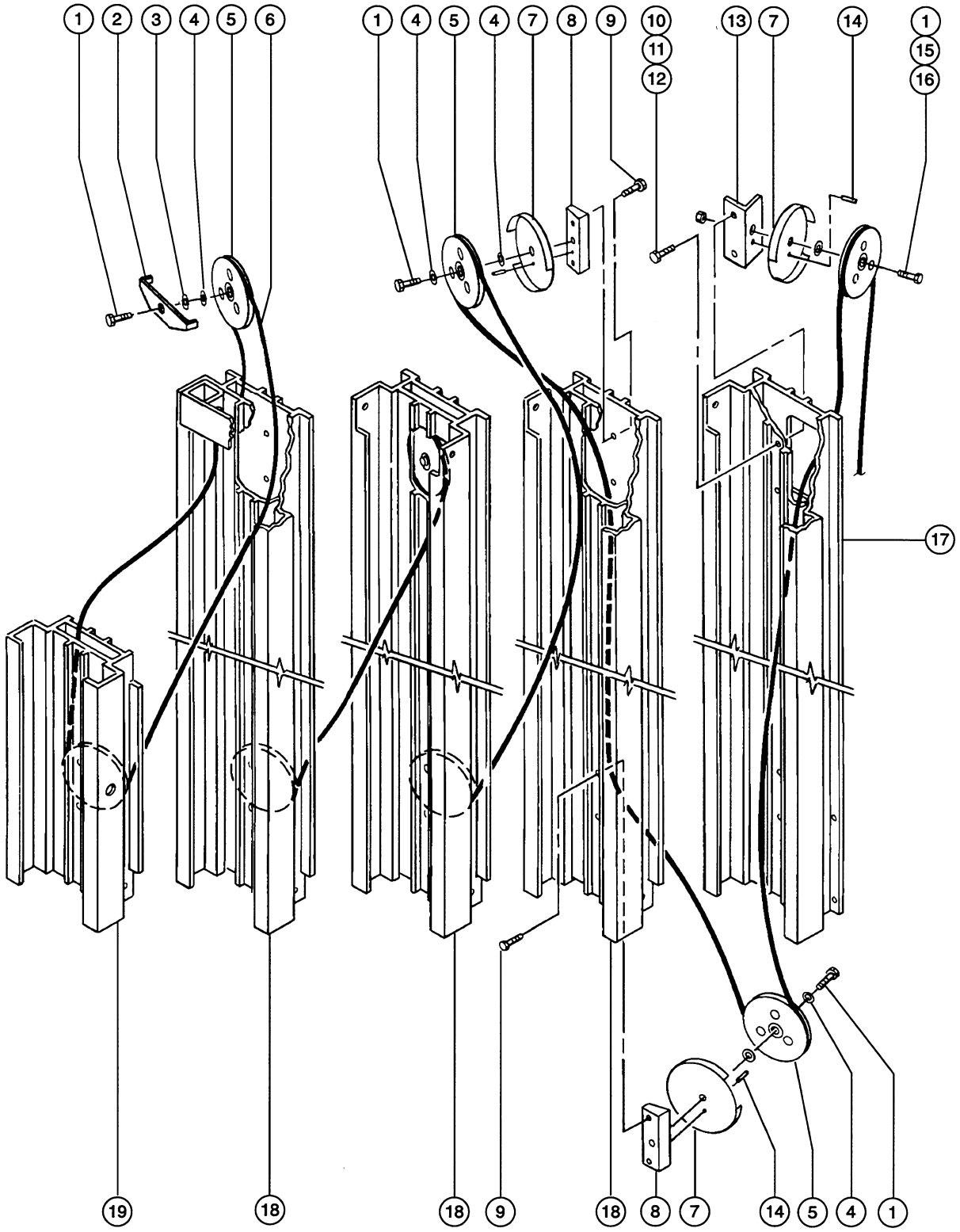

FIGURE 7-F

Index	Part No.	Description	Quantity This Figure
1	10597	Screw - HHC, 1/2 -13 x 1.25 inches, GR 5	8
2	33420	Guard - Cable, Outer	1
3	8519	Washer - Shim, 0.5 x 0.875 x 0.033	1
4	6052	Washer - Shim, 0.5 x 0.875 x 0.063 inch	14
5	32469	Pulley with Bearing	8
6	35005	Cable Assembly - SLC-6	1
—	6099	Cable Assembly - SLC-12	—
—	7250	Cable Assembly - SLC-18	—
—	7251	Cable Assembly - SLC-24	—
7	32476	Guard - Cable	8
8	32470	Mount - Pulley	7
9	8255	Screw - HHC, 3/8 -16 x 0.75 inch, GR 5	14
10	6019	Screw - HHC, 3/8 -16 x 1.25 inches, GR 5	2
11	6097	Washer - Flat, 0.375 inch	2
12	4828	Nut - Nylock, 3/8 -16	2
13	33700	Mount - Pulley, Number 1 Mast	1
14	32483	Pin - Roll, 0.25 x 0.50 inch	10
15	33383	Washer - Flat Hardened, 0.5 x 0.090	1
16	6198	Nut - Nylock, 1/2 -13	1
17	33832	Column - Number 1, All Models	1
18	33833	Column - Number 2 Through 4, All Models	3
19	33378	Carriage - All Models	1

Figure 7-G

Load Handling Attachments - Forks

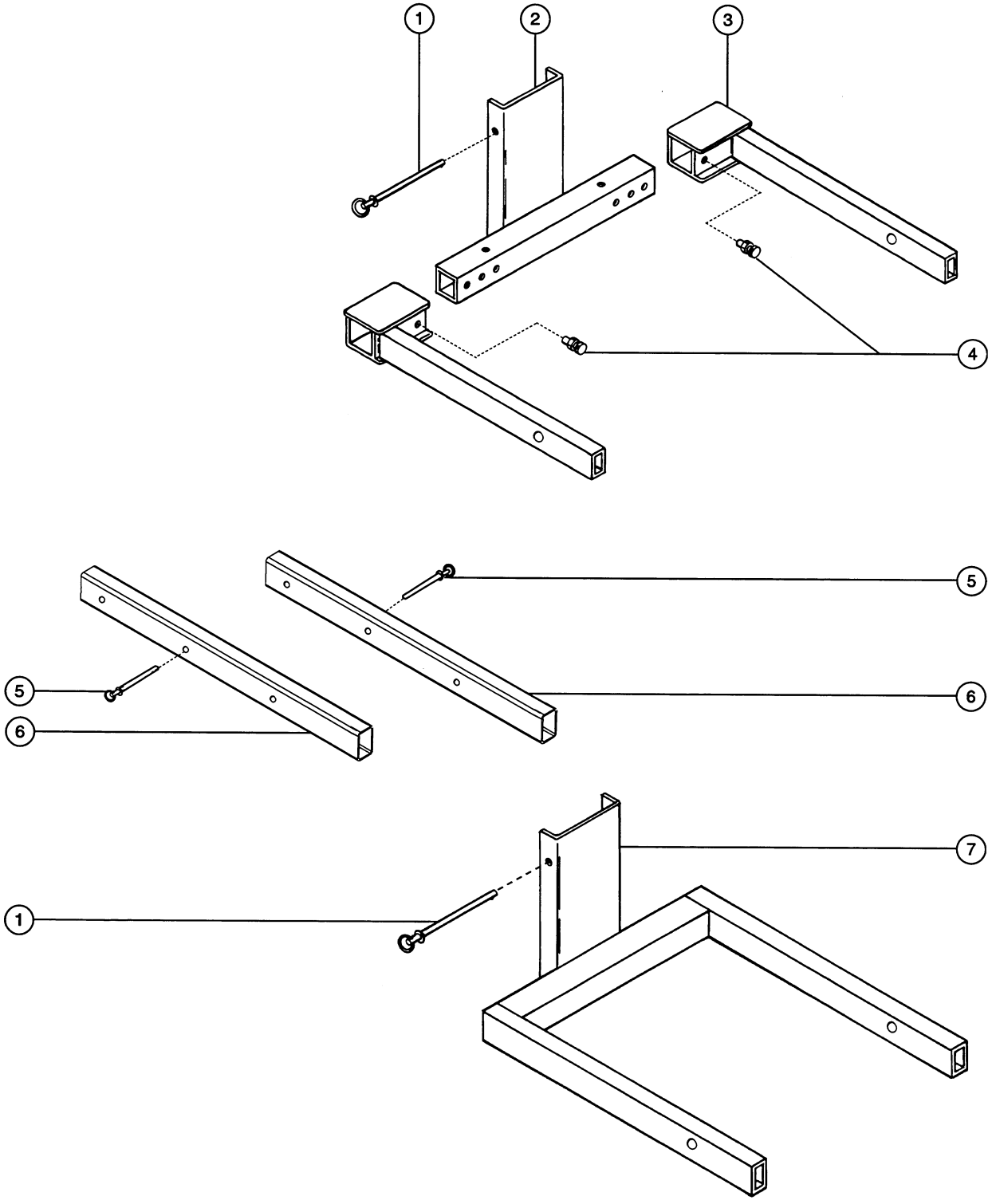

FIGURE 7-G

Index	Part No.	Description	Quantity This Figure
—	35160	Option - Standard Fork, Complete (includes index numbers 1 and 7)	—
—	33543	Option - Adjustable Fork, Complete (includes index numbers 1, 2, 3 , 4 and 5)	—
—	32565	Option - Non-marking Extrusion, Standard and Adjustable Forks (not shown)	—
—	33650	Option - Fork Extensions, Standard and Adjustable Forks (includes index numbers 5 and 6)	—
1	48301	Pin - Retaining	2
2	33542	Carrier - Adjustable Fork (includes decals)	1
3	33707	Fork - Adjustable	2
4	32375	Pin - Long, Fork Lock, 5/8 - 11	2
—	33674	Pin - Short, Fork Lock, 5/8 - 18 (serial number break not available at time of printing)	—
5	32500	Pin - Detent	2
6	33366-S	Tube - Fork Extensions	2
7	33984	Fork - Standard (includes decal)	1

Figure 7-H

Load Handlimg Attachments - Boom, Pipe Cradle and Load Platform

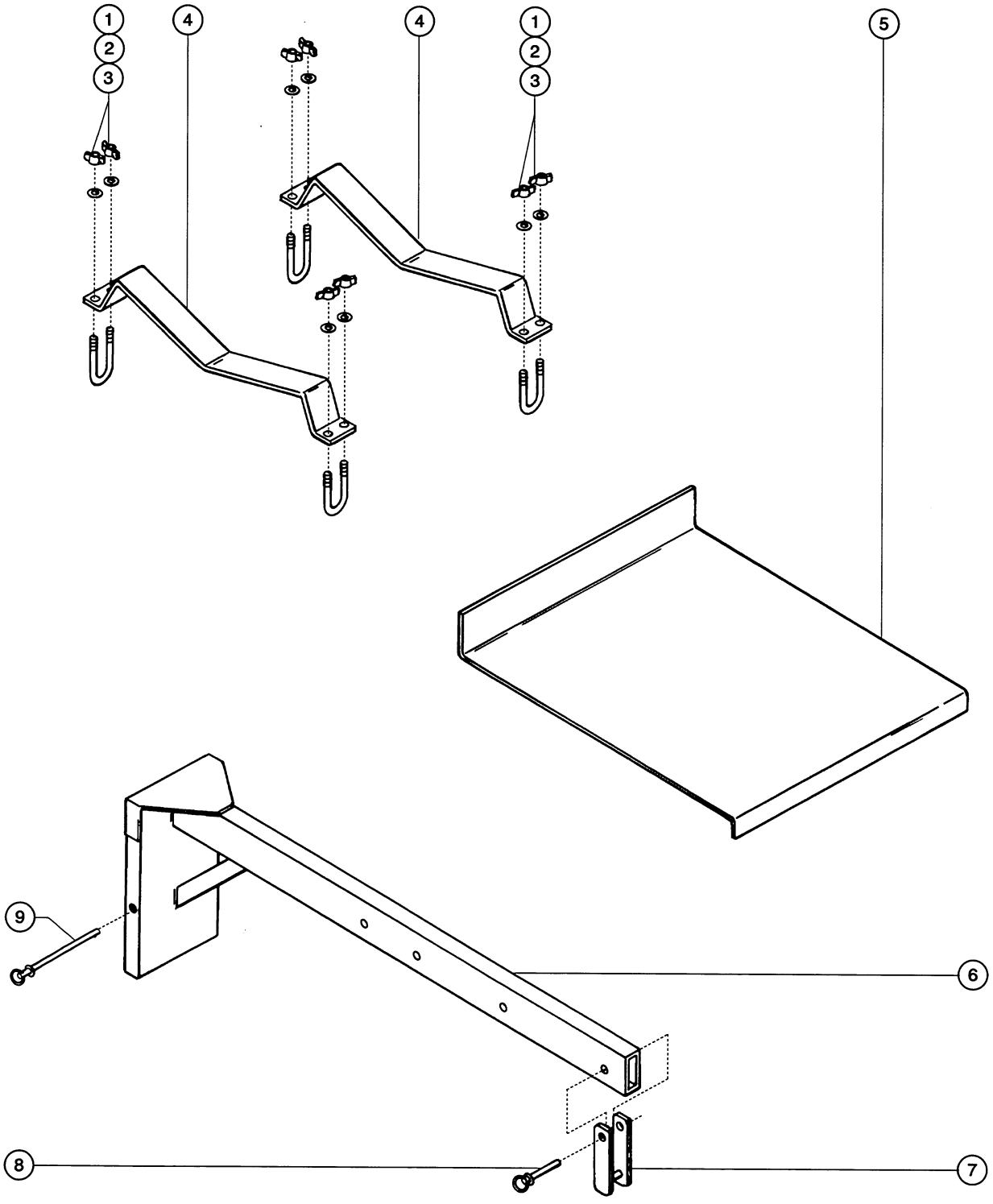

FIGURE 7-H

Index	Part No.	Description	Quantity This Figure
—	32569	Option - Pipe Cradle, Complete (includes index numbers 1 through 4)	—
—	32568	Option - Load Platform, Adjustable Forks (includes index number 5)	—
—	35220	Option - Load Platform, Standard Forks (includes index number 5)	—
—	32567	Option - Boom, Complete (includes index number 6 through 9)	—
1	8170	Nut - Wing, 1/4 -20	8
2	6638	Washer - Flat, 1/4 inch	8
3	33045	U-bolt, 1/4 -20	4
4	33044P	Cradle - Pipe	2
5	32937	Weldment - Load Platform, Adjustable Forks (includes decals)	1
—	35021	Weldment - Load Platform, Standard Forks (includes decals)	1
6	32887	Boom Assembly (includes decals)	1
7	32579	Weldment - Lifting Clevis	1
8	32500	Pin - 0.5 x 2.5 inches (1.27 x 6.35 cm)	1
9	48301	Pin - 0.5 x 7.75 inches (1.27 x 19.9 cm)	1

Figure 7-I

Single Speed Winch

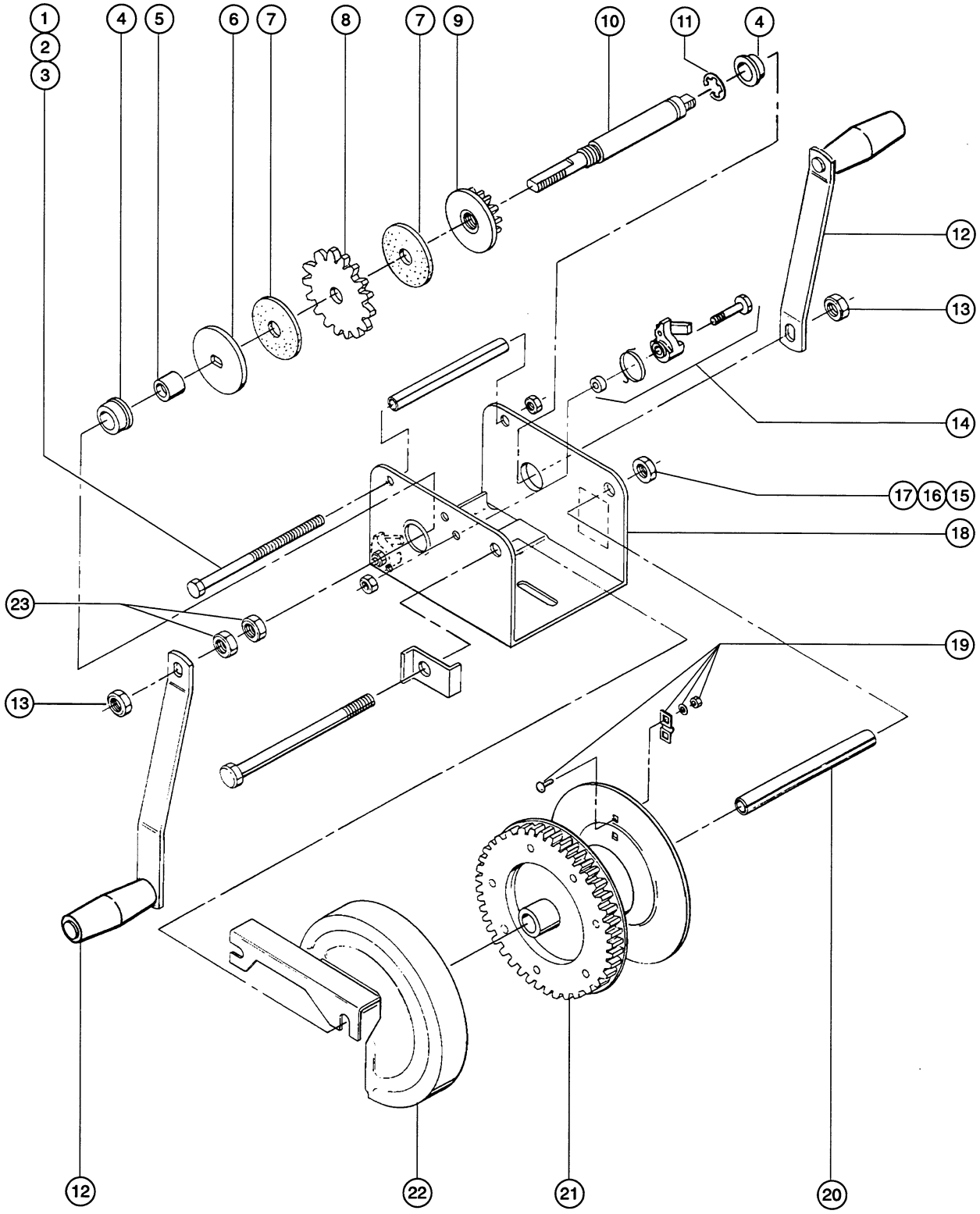

FIGURE 7-I

Index	Part No.	Description	Quantity This Figure
—	32945	Winch Assembly (handles not included)	—
1	7256	Screw - HHC, 5/16 -18 x 6 inches, GR 5	1
2	7584	Spacer - Frame	1
3	5319	Nut - Lock, 5/16 -18	1
4	6199	Bushing - Pinion Shaft	2
5	32890	Spacer - Pinion Shaft	1
6	7591	Pinion Plate	1
7	7571	Friction Disk	2
8	6777	Ratchet Gear	1
9	7590	Pinion Gear	1
10	32891	Pinion Shaft	1
11	6200	Retaining Ring, 0.75 inches	1
12	33143	Handle, 6 inches (15.2 cm), SLC-6	2
—	33144	Handle, 8 inches (20.3 cm), SLC-12, 18, and 24	2
13	6086	Nut - Low Profile Nylock, 1/2 -13	2
14	40458	Ratchet Kit (not available as service part)	—
15	23415	Nut - Low Profile Lock, 1/2 -13	1
16	6184	Spacer - Drum	1
17	6185	Drum Bolt	1
18	32892	Frame and Drum Support	1
19	6190	Cable Keeper Kit	1
20	6184	Spacer - Drum	1
21	Ref.	Drum Assembly	—
22	6770	Cover - Drum Gear	1
23	6034	Nut - Hex Jam, 1/2 -13	2

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